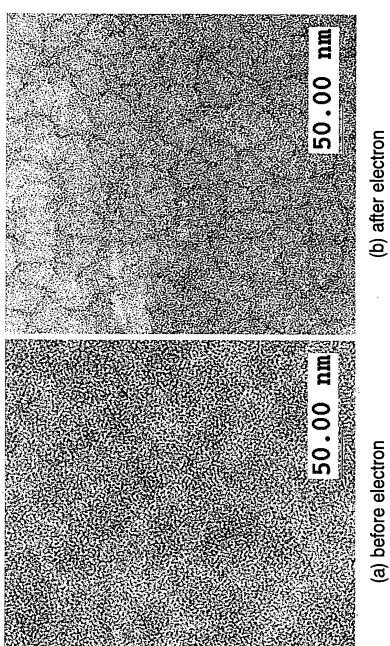
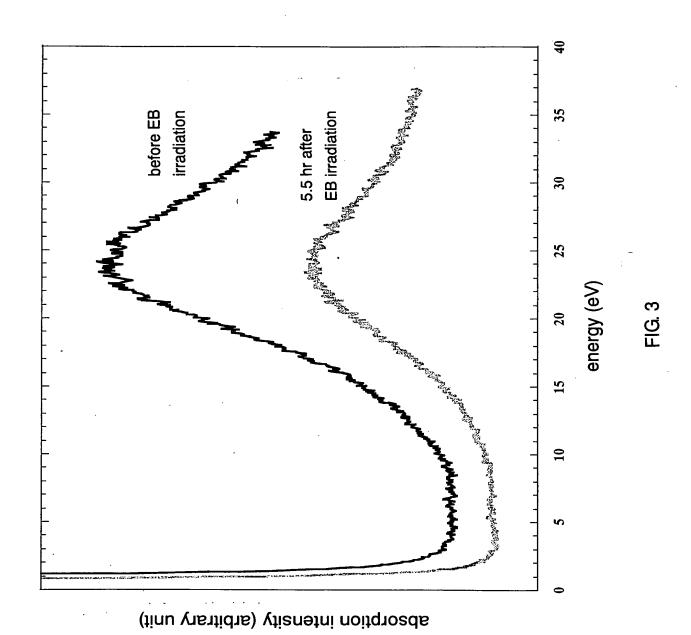


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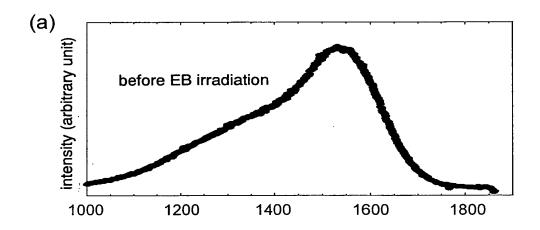


beam irradiation (b) after electron

beam irradiation



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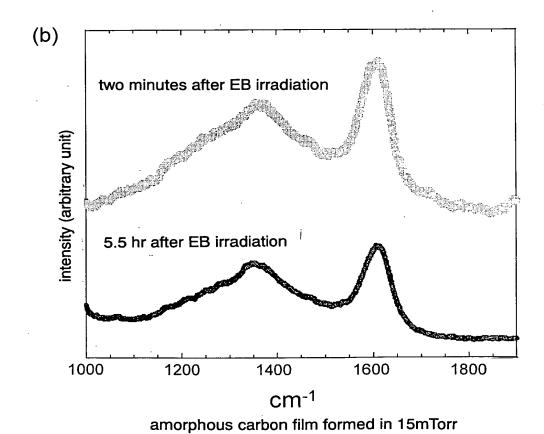


FIG. 4

mixed gas containing Ar and methane

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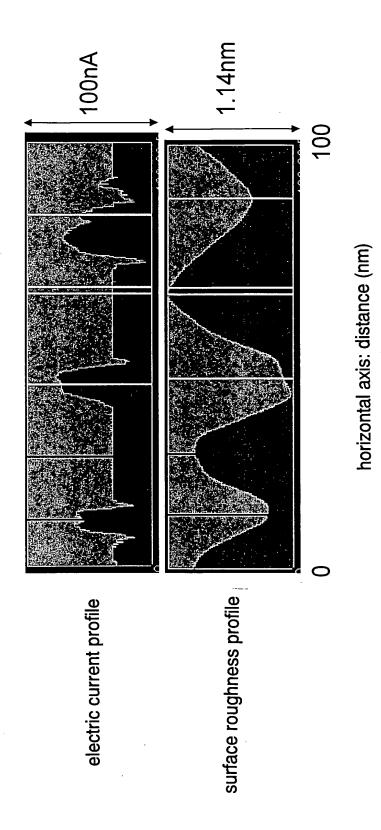


FIG. 5

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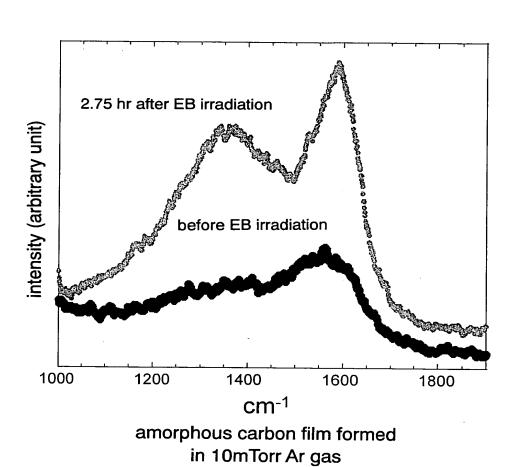
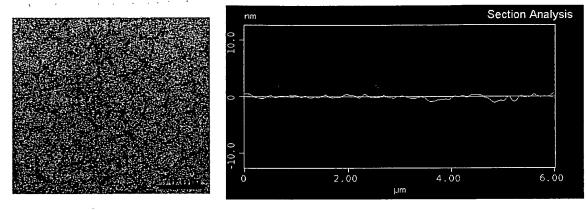


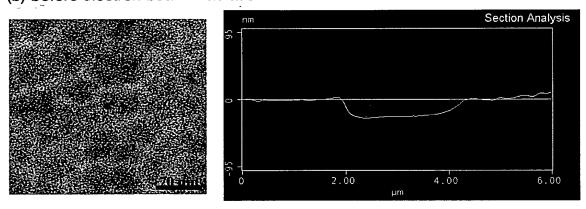
FIG. 6

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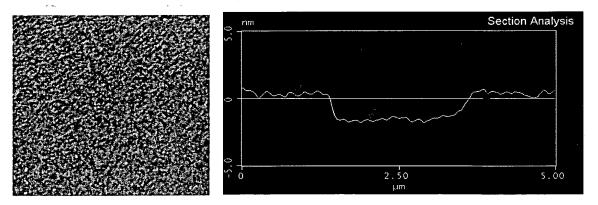
#### (a) after electron beam irradiation



### (b) before electron beam irradiation



### (c) sputtered a-C film



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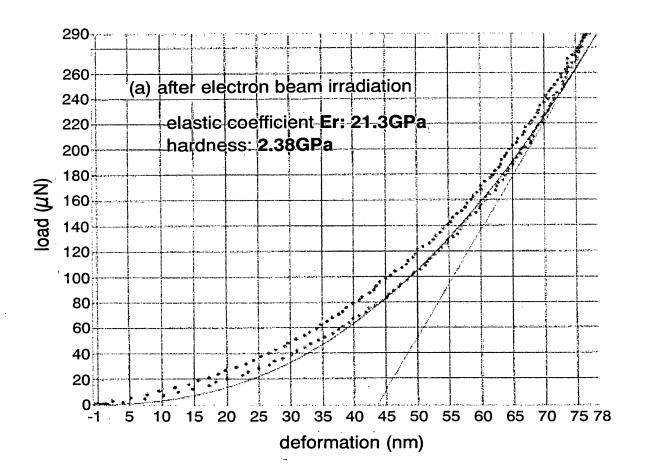


FIG. 8A

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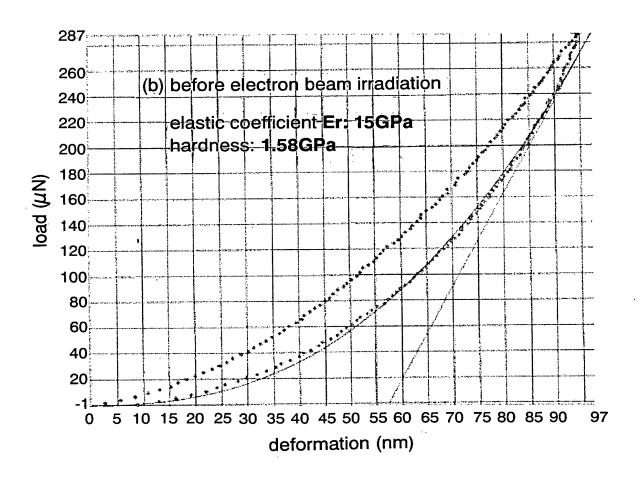


FIG. 8B

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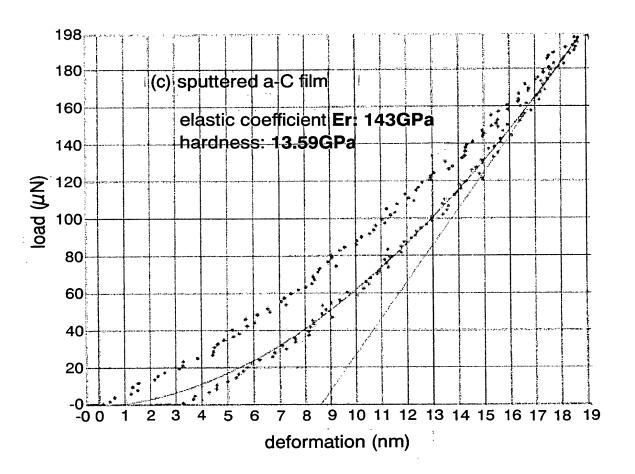
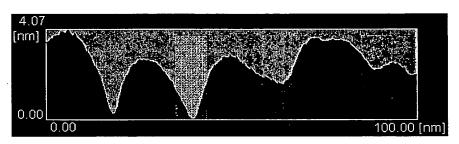


FIG. 8C

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## (a) surface unevenness



# (b) cos image

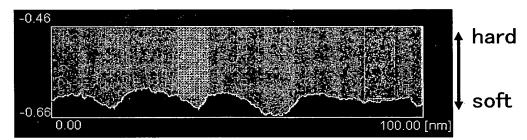
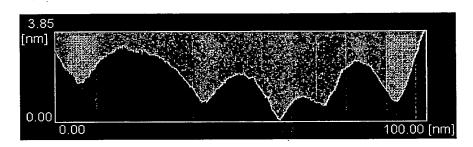


FIG. 9

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(a) surface unevenness



# (b) cos image

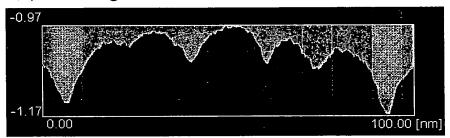


FIG. 10

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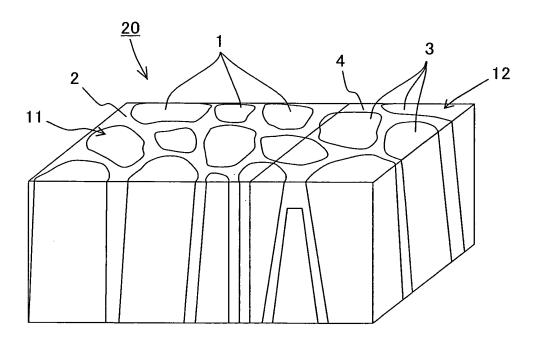


FIG. 11

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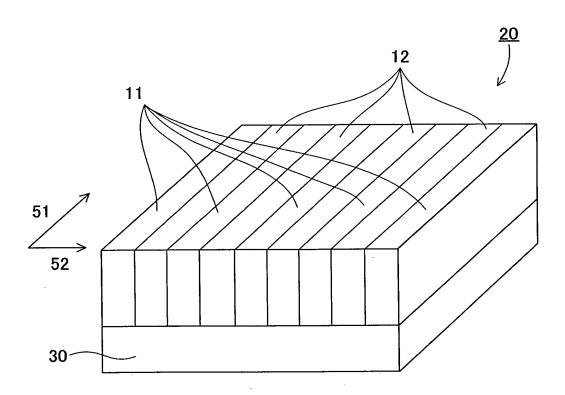


FIG. 12

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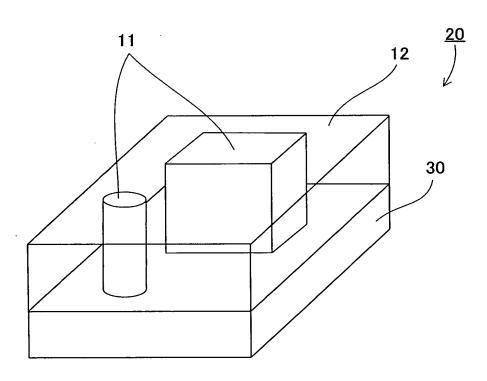


FIG. 13

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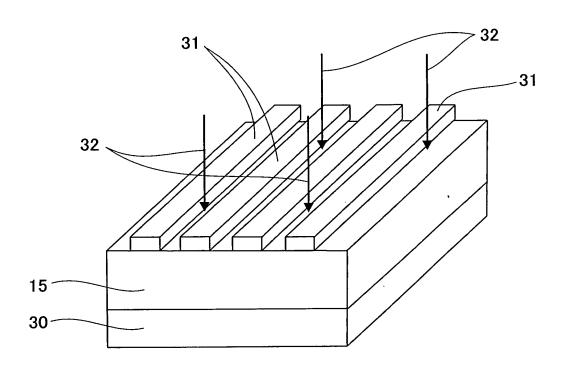


FIG. 14

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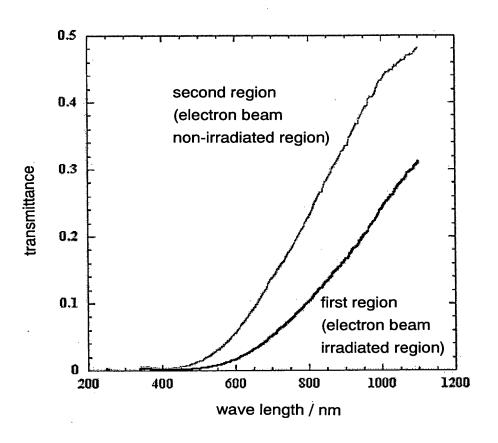


FIG. 15

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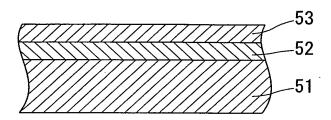


FIG. 16

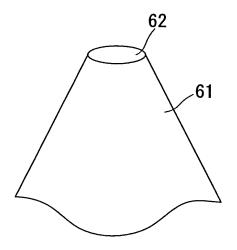


FIG. 17